

CHAPTER III.

PROTECTION AND IMPROVEMENT.

ESTABLISHMENT.

27. The only change in the *personnel* occurred in Ratnágiri, where 18 men were added to the establishment at a monthly cost of Rs. 224.

28. Revised proposals for the re-organization and training of subordinate establishments were submitted to Government in October by a Committee which sat at Poona during the rains. The want of trained men and of an increase in the number of executive officers is greatly felt.

BREACHES OF THE LAW.

29. The number of prosecutions disposed of by magistrates is as follows :—

No.	Divisions.	1888-89.			1889-90.			Percentage of failures.	
		Cases in which conviction was obtained.	Cases in which conviction failed.	Total.	Cases in which conviction was obtained.	Cases in which conviction failed.	Total.	1888-89.	1889-90.
1	Northern Division of Kánara.	11	2	13	10	4	14	15	23
2	Central Division of Kánara...	5	3	8	9	3	12	37	25
3	Southern Division of Kánara.	9	9	18	9	13	22	50	59
4	Belgaum ...	11	1	12	35	7	42	8	16
5	Dhárwár ...	5	1	6	5	4	9	16	44
6	Kolába ...	45	9	54	20	4	24	17	16
7	Bijápur ...	8	3	11	8	2	10	27	20
8	Ratnágiri ...	4	3	7	5	...	5	42	...
	Total ...	98	31	129	101	37	138	24	26

30. The increase in the number of cases occurs chiefly in Belgaum where it is ascribed to increased efficiency on the part of the subordinates.

31. There is a large increase in the percentage of failures in Dhárwár; for this, the Divisional Officer is unable to furnish conclusive reasons.

32. The cases compounded are shown in the following statement :—

No.	Division.	1888-89.		1889-90.	
		Number of cases commuted.	Amount of fines recovered.	Number of cases commuted.	Amount of fines recovered.
			Rs. a. p.		Rs. a. p.
1	Northern Division of Kánara ...	20	37 9 2	19	102 2 10
2	Central Division of Kánara ...	9	92 9 7	14	135 5 9
3	Southern Division of Kánara ...	109	401 0 0	140	574 0 0
4	Belgaum ...	62	307 12 11	99	384 14 0
5	Dhárwár ...	60	148 12 11	27	26 1 0
6	Kolába ...	194	855 2 3	189	884 12 9
7	Bijápur ...	89	174 15 3	93	398 2 0
8	Ratnágiri...	56	252 11 3	93	288 2 8
	Total ...	599	2,270 9 4	674	2,793 9 0

33. Increase in the number of cases compounded is met with chiefly in Belgaum, Southern Division of Kánara, and Ratnágiri. In Belgaum the increase is chiefly owing to cases brought on account of the removal of firewood for sale without permits: and in Southern Kánara it is mainly ascribable to cases concerning the unauthorized cutting of *rāb* by rayats in the Siddápur-sub-division.

34. In Ratnágiri the increase is ascribed to increased efficiency since the entertainment of an additional establishment.

35. A statement showing the number of cases compounded or taken into Court is given below :—

No.	Division.	Taken into Court.		Compromised under Section 67.		Total number of Cases.	
		1888-89.	1889-90.	1888-89.	1889-90.	1888-89.	1889-90.
1	Northern Division of Kánara ...	16	11	20	19	36	30
2	Central Division of Kánara ...	13	8	9	15	22	28
3	Southern Division of Kánara ...	55	22	109	140	164	162
4	Belgaum ...	13	50	62	99	75	149
5	Dhárwár ...	6	9	60	27	66	36
6	Kolába ...	58	24	194	189	252	213
7	Bijápur ...	14	7	89	93	103	103
8	Ratnágiri ...	7	5	56	93	63	98
	Total ...	182	136	599	675	781	819

36. In paragraph 40 of the administration report for 1888-89, 53 cases were shown to be pending at the close of that year but 37 of these are now reported to have been compounded. If the 16 cases pending at the beginning of the year be added to the 136 of the year under report, the total number as shown in form No. 50, appended, is 152, of which 14 remained undecided at the close of the year.

37. *Civil Suits.*—In Kolába two important suits were decided in favour of Government. In one Ganesh Ramchandra Bedekar claimed Rs 4,569-8-0 for protecting the Chikni forests in Nágothna. The other was a claim to all trees except teak in a Government forest, and was a test-case of great importance.

FOREST-FIRES

38. Were prevalent in the forests not evergreen and not specially-protected.

39. Special measures of protection were adopted for 650,538 acres, of which 79,716 are reported to have been burnt. Fires were most prevalent, in the specially-protected areas, in the Southern and Central Divisions of Kánara. In the Northern Division of Kánara, the protection afforded was, all things considered, extremely good, and reflects great credit on Mr. Talbot, Forest-Ranger Ghosekhán and the officers and men working under them.

40. This is the first year in which special fire-protection on a large scale has been, on the whole, successful in any part of the Southern Circle. The portion protected of the Northern Division of Kánara comprises nearly the whole of the teak-bearing tracts of that Division. Great difficulties had to be contended with. In one day, in the forest near Yermukh in the Gund-group, no less than 14 distinct fires broke out in different parts of the area. In consequence of this determined attempt to fire the jungles, I have applied to Government for permission to close the forest to grazing for a year. The specially-protected area of the Northern Division comprised an area of 299,503 acres, and of this area 54,206 acres, or 18 per cent., are estimated to have been burnt. The special protection in the Central and Southern Divisions was much less satisfactory.

41. Maps showing the fire-lines are prepared every season and carefully scrutinized before being finally approved.

42. The results of fire-protective measures, as reported by the Divisional Officers, are exhibited in the following statement :—

Division.	AREA IN SQUARE MILES.			Proportion of failures to area attempted.	Cost.		Proportion of area under fire-protection to total area of Reserve.
	Attempted.	Failures.	Protected.		Per Square Mile protected.	Per Acre protected.	
				Percentage	Rs.	Pies.	
Northern Division of Kánara ...	467.97	84.69	383.27	18	16.06	3.9	
Central Division of Kánara ...	135.46	14.88	120.58	10	17.67	4.7	
Southern Division of Kánara ...	131.70	4.48	127.21	3	2.32	.6	
Belgaum	138.47	9.73	128.74	7	11.23	3.1	
Dhárwár	33.51	4.60	28.91	13	16.03	4.1	
Bijápúr	72.47	.80	71.69	1	3.16	.9	
Kolába	36.29	5.35	30.94	14	19.87	5.0	
Ratnágiri	.56	...	.56	...	43.16	12.8	
Total in 1889-90...	1,016	125	892	12	12.73	3.8	56
Total in 1888-89...	997	185	812	19	4.33	1.30	55
Increase or Decrease in 1889-90...	+ 19	-60	+ 80	-7	+ 8.40	+ 2.5	+ 1

43. I do not feel satisfied as to the accuracy of these returns, and Government will perceive that what I have reported above does not correspond with the divisional statements. Last hot weather I traversed in several directions the Northern, Central and Southern Divisions of Kánara in order to be able to judge for myself to what extent protective measures had been successful, and I found that everywhere fire had got into the specially-protected areas of the Central and Southern Divisions, but that fires were rare in protected areas of the Northern Division. It is, no doubt, extremely difficult to estimate the areas burnt, but I fear that the subordinate-officers often purposely furnish wrong returns as they know the great importance that is attached to the protection of the forests from fire, and are afraid of being transferred, or punished, if the reported results of protection are not satisfactory.

44. The system of reporting fires, described in the 111th paragraph of the report on the Northern Circle for 1887-88, has been adopted in the Southern Circle since the receipt of the Government-Resolution on last year's reports.

45. The Government of India have, in their letter to Government, reviewing the reports of the Conservators for 1888-89, contrasted the results of fire-protection in the Northern and Southern Circles very much to the disadvantage of the latter. I cannot account for the great difference in the cost of protecting forests in the two Circles; but it may be partly due to the much larger permanent protective establishment of the Northern Circle, to cheapness of labour, and to there being a far smaller proportion of protected forest in that Circle. In the Southern Circle, contiguous patches of reserved and protected occur in most villages and this chess-board arrangement of the two classes over vast areas makes the protection of the reserved areas more expensive than it would be if the classes were more separated.

46. The area which is reported to have escaped fire without the taking of any special measures, amounts to 3,299 square miles, or 65 per cent. of the whole forest-area.

47. The total area of compact evergreen forest is estimated to be 659 square miles.

48. These evergreen forests are situated, for the greater part, on the western slopes of the gháts of Kánara, and generally escape fire without any measures being taken for their protection.

49. The attempt to eradicate *bakrá*, referred to in the 54th paragraph of last year's report, has not been successful. Mr. Murray reports that fresh *bakrá* is springing up in the old places

GRAZING AND FENCING.

50. The improvement in the returns for grazing under the new regulation, referred to in paragraph 55 of last year's report, regarding the issue of permits to graze cattle, was not quite as large as was expected; still it amounted to Rs. 5,485, of which Rs. 4,197 were realized in the Belgaum Division. It should also be noted that the increased return is in spite of increased closures.

51. The following statement shows the areas closed to grazing during 1888-89 and 1889-90:—

Division.	AREA CLOSED.			
	1888-89.		1889-90.	
	Sq. miles.	Acres.	Sq. miles.	Acres.
Northern Division of Kanára ...	...	...	181	279
Belgaum ...	19	7	19	7
Dhárwár ...	58	325	93	142
Bijápur ...	...	...	10	174
Kolába ...	6	567	6	567
Total ...	84	259	310	529

52. No fencing was put up with the exception of a fence round 45 acres in the Gókák-Range.

NATURAL REPRODUCTION.

53. *Northern Division of Kanára.*—The information furnished by the Divisional Officer is meagre, but there can be no doubt that the very successful protection afforded there against fire will have a good effect on natural reproduction by seed.

54. *Central Division of Kanára.*—The Divisional Officer reports that in the Yellápur-sub-division reproduction by seed is on the whole good, and that teak seedlings are plentiful, but that in the rocky tracts bordering the coast, and in the more open and fire-traversed tracts of the Mundgod-Range, reproduction is not good.

55. *Southern Division of Kanára.*—Mr. Woodrow reports that reproduction by seed is bad owing to the prevalence of fires. More effective and extensive operations are required here for the protection from fire of reserved areas.

56. *Belgaum.*—Mr. Murray reports that in the timber-forests of Khánápúr, there was good reproduction from seed owing to the entire absence of fire, but that in the more eastern tracts owing to the annual fires, it is almost at a standstill in areas not specially-protected.

57. *Dhárwár.*—Mr. Hight has not reported on the state of natural reproduction by seed in this Division. The jungles are all small and open and depend mostly on coppice and artificial means for their regeneration.

58. *Bijápur.*—Mr. Ryan reports that ním-seedlings are appearing in the neighbourhood of Guledgudd, but that natural reproduction is on the whole very poor in the Bijápur-District owing to the uncertain and inferior rainfall and the heavy demands on the forests by the surrounding population.

59. The forests generally are so poor that they ought to be closed for a long period, but the demand for firewood does not admit of complete closure. Portions are, however, being selected for closure and some have been already closed.

60. *Kolába-Ratnágiri*.—The Divisional Officer does not refer to the state of natural reproduction by seed. The forests here are mostly coppice, and he reports favourably of the reproduction from stools.

61. *General*.—All officers, except Mr. Ryan (Divisional Officer, Bijápur,) report favourably of reproduction from stools.

62. On the whole, the reports speak more favourably of reproduction by seed during the past season. All that is necessary to ensure natural reproduction in all the most valuable timber forest-tracts is protection from fire and grazing, and considerable progress has been made this year in these respects.

ARTIFICIAL REGENERATION.

63. *Northern Division of Kánara*.—11,500 plants of casuarina were put down in the Kárwár plantations, and a nursery containing 8,000 more was prepared.

64. *Central Division of Kánara*.—In the Mundgód-range, 7 bags of teak-seeds, and 9 bags of seeds of other species, were sown in the Pur, Bachenki, Sanvalli and Márgaddi jungles, and Mr. Haselden reports that the seeds germinated freely and that the seedlings have survived excepting some which were destroyed by fire.

65. In the Kumtá-range 5 bags of teak-seeds and 4 of other species were sown, but only 60 junglewood and 40 teak-seedlings have survived the hot weather. The cost was, however, *nil*.

66. Nine sacks of teak-seeds, 9 of junglewood-seeds and 1 of hardás were collected and sown in nurseries at Katgál and Kuchalnád. Up to the beginning of July 3,000 teak, 185 junglewood and 10 hardás had germinated, and were to be planted out in the forest during the present rainy season.

67. In Ankólá 4 sacks of teak-seeds, 1 of blackwood-seeds and 15 of junglewood-seeds were collected and sown in the jungles near Hattikeri and Ráman-góli, and are reported to have germinated freely.

68. In the Yellápúr-range a cart-load of seeds was sown under dying *kárví*, and, by the first of July, 379 teak, 6 blackwood and 29 junglewood had appeared.

69. 2,088 junglewood-seedlings were planted out from nurseries of which, it is expected, half will survive.

70. *Southern Division of Kánara*.—In the casuarina-plantation of Kásarkód 1,040 plants were attacked by some unknown disease, which is spreading and will, it is feared, kill all the trees in the plantation. Specimens of the diseased trees were sent to the Entomologist at Dehra Dun in December last, but no reply has been received from him, so it is presumed that no cure is known.

71. Mr. Woodrow reports that seeds were collected and sown broad-cast, but that the sowings proved failures, probably owing to suitable sites not having been selected for the purpose.

72. *Belgaum*.—45 acres were fenced and sown broad-cast with seeds of nim, matti and kindali; and Mr. Murray reports that a large number of plants have come up, and survived the hot weather.

Seeds were also collected in the Belgaum and Khánápúr sub-divisions, and nurseries prepared in 11 places in Belgaum, 4 in Khánápúr and 1 in Parasgad.

73. *Dhárwár*.—Mr. Hight reports on the very successful teak-plantation of 125 acres near Kalkundi in the Kalghatgi-sub-division; the whole of it, when he saw it in January, and again in April, was well-stocked with thriving seedlings.

74. About 10 maunds of seed were collected.

75. The system of sowing followed by Mr. Hight is to pick up and loosen the soil in patches and to sow in the patches, and he considers this method more successful than merely sowing broad-cast. In the Dhárwár District the soil in the forests is generally hard or weedy and no doubt broad-cast sowing without previous preparation of the ground for the reception of the seed would

not answer. Mr. Hight gives no particulars as to the area sown in this manner, although he says that the results are not discouraging.

76. *Bijápúr*.—Attempts at artificial regeneration in 1889 were not successful on the whole. 14,000 pits were dug in the jungles and sown with seeds, but the sites of such operations were badly chosen owing to absence of shelter, and the plants died of drought.

77. 892 maunds of seeds were collected.

78. *Kolába-Ratnágiri*.—Nothing important in the way of artificial regeneration was effected in this division. 750 casuarinas were planted out at Sáttád.

79. The Divisional Officer reports that the old casuarina plantations in Chiplún and Málvan, aggregating 103 acres, are not flourishing, and no extension of either was carried out. The Dápoli plantation of 119 acres is reported to be very flourishing.

COMMUNICATIONS AND BUILDINGS.

80. A sum of Rs. 5,494 was expended on works under this head: on "Roads and Bridges", Rs. 572; "Buildings", Rs. 4,685; and Other Works, Rs. 237.

81. In the Northern Division of Kánara Forest cart-tracks were repaired (Rs. 43) and a building for the Divisional Office was built at Halliál (Rs. 350).

82. In the Central Division of Kánara the Hittalkargadda-Mágód, and Kannigeri-Udamaki, roads, as well as cart-tracks, were repaired (Rs. 447); two new watch-houses were built (Rs. 550) and a building for a Náka at Bálegúli was purchased from the Postal Department (Rs. 300).

83. In the Southern Division of Kánara the forest road from Manchikeri to the Kátur-Depôt and other tracks were repaired (Rs. 57). A new watch-house was built (Rs. 300) and Rs. 766 were expended in completing the office-quarters of the Divisional Officer.

84. In Belgaum two new watch-houses were built (Rs. 560) and the rest-house at Nágargali, was repaired (Rs. 251).

85. In Dhárwár, the Dévikóp rest-house and certain watch-houses were put in repair (Rs. 308).

86. In Ratnágiri the Bándh-road was repaired (Rs. 25).

CHAPTER IV.

YIELD AND WORKING.

87. The following is a summary of the yield of the forests of the several Divisions for 1888-89 and 1889-90:—

88. *Northern, Central and Southern Divisions of Kánara*.—The large teak exploited during 1889-90 amounted to 247,375 cubic feet against 250,576 cubic feet in 1888-89; the small teak exploited, such as poles and rafters, amounted to 72,640 cubic feet against 80,401 cubic feet. There was a falling off in the quantity brought in to the Halliál-Depôt (which was 95,827 cubic feet against 97,907 cubic feet in 1888-89). The exploitation of timber was restricted for a time in anticipation of an early decision of Government regarding the construction and route of the proposed railway from Gund, which would have greatly cheapened the cost of transport as compared with that of cartage.

89. The out-turn of sleeper-pieces also shows a decrease (16,230 cubic feet in 1889-90, and 46,657 in 1888-89). There is no demand for railway-sleepers now.

90. The large junglewood removed amounted to 322,080 cubic feet against 314,090 cubic feet in the previous year, and the poles, pieces and stakes to